

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A chain-driving mechanism comprising:

a plurality of sprockets disposed in series;

an endless chain wound onto the plurality of sprockets in order to transmit a driving force given to at least one of the plurality of sprockets to the remaining sprockets and drive the remaining sprockets; and

a chain guide disposed adjacent to ~~the said~~ chain so as to sandwich ~~the said~~ chain from an outside of an outer periphery thereof;

wherein said sprockets are arranged so as to satisfy a following relation (1)

$$(1) \quad P \times N = 2L$$

where L is a pitch of said sprockets, P is a pitch of said chain, and N is a condition establishment variable which is a multiple of 0.5.

2. (Currently Amended) The chain-driving mechanism as set forth in claim 1, wherein ~~the plurality of each of said sprockets are~~ is disposed so as to rotate around an axial line extending substantially horizontally, and ~~the said~~ chain guide is disposed so as to sandwich ~~the said chain from an outside in upward and downward directions~~ above and below.

3. (Currently Amended) The chain-driving mechanism as set forth in claim 1, wherein ~~the said~~ chain guide is made of a softer material than ~~the said~~ chain.

4. (Currently Amended) A conveyor apparatus comprising:

a plurality of carriers arranged to convey objects to be conveyed;

a driving mechanism that drives ~~the plurality of said~~ carriers in conjunction with each other; and

a driving source that exerts a driving force onto ~~the said~~ driving mechanism,

wherein ~~the said~~ driving mechanism comprises:

a plurality of sprockets that are disposed in series and that rotate coaxially with and

together with ~~the plurality of said~~ carriers;

an endless chain wound onto ~~the said~~ plurality of sprockets; and

a chain guide disposed adjacent to ~~the said~~ chain so as to sandwich ~~the said~~ chain from an outside of an outer periphery thereof;

wherein said sprockets are arranged so as to satisfy a following relation (1)

$$(1) \quad P \times N = 2L$$

where L is a pitch of said sprockets, P is a pitch of said chain, and N is a condition establishment variable which is a multiple of 0.5.

5. (Currently Amended) The conveyor apparatus as set forth in claim 4, wherein ~~the plurality of each of said~~ carriers and ~~the plurality of each of said~~ sprockets ~~are is~~ disposed so as to rotate around an axial line extending substantially horizontally, and ~~the said~~ chain guide is disposed so as to sandwich ~~the said~~ chain from ~~an outside in upward and downward directions~~ above and below.

6. (Currently Amended) The conveyor apparatus as set forth in claim 4, wherein ~~the said~~ chain guide is made of a softer material than ~~the said~~ chain.

7. (Currently Amended) The conveyor apparatus as set forth in claim 4, ~~wherein the chain guide is detachably attached to~~ further comprising a frame supporting ~~the plurality of said~~ carriers; and

wherein said chain guide is detachably attached to said frame.

8. (New) The conveyor apparatus as set forth in claim 4, wherein said plurality of sprockets includes end sprockets that are disposed at both ends of said plurality of sprockets, and at least one middle sprocket that is disposed in a middle area between said end sprockets;

each of said end sprockets engages with said chain around substantially half a

circumference thereof; and

said at least one middle sprocket engages with said chain in an upper area and in a lower area thereof.

9. (New) The conveyor apparatus as set forth in claim 4, wherein said sprockets are arranged such that the pitch L is greater than outer diameters of said sprockets.

10. (New) The chain-driving mechanism as set forth in claim 1, wherein said plurality of sprockets includes end sprockets that are disposed at both ends of said plurality of sprockets, and at least one middle sprocket that is disposed in a middle area between said end sprockets;

each of said end sprockets engages with said chain around substantially half a circumference thereof; and

said at least one middle sprocket engages with said chain in an upper area and in a lower area thereof.

11. (New) The chain-driving mechanism as set forth in claim 1, wherein said sprockets are arranged such that the pitch L is greater than outer diameters of said sprockets.